

Claims

1 1. A foot actuated toilet flushing apparatus comprising:
2 a pedal having a top plate pivotably attached to a base plate;
3 a first roller attached to said top plate;
4 a second roller attached to said base plate;
5 a tank clamp positioned on a backside edge of a tank of a toilet having an internal
6 release means and extending into an interior of said tank;
7 a cable residing in said pedal, extending out said base plate and into said interior
8 of said tank at said backside of said toilet, whereby said cable is held in place
9 by said tank clamp and connected to said internal release means within said
10 tank; and
11 a cable housing encasing at least a portion of said cable,
12 whereby upon applying pressure by foot to said top plate of said pedal, a length of said
13 cable is increased within said pedal and decreased by said length within said interior of
14 said tank to activate said internal release means and effect flushing of said toilet.

1 2. The apparatus of claim 1 wherein said cable is sequentially positioned extending
2 from said base plate, over said first roller of said top plate, around said second roller of
3 said base plate, extending out at least one opening of said base plate so as to extend into
4 and be encased by said cable housing, said cable housing exiting said base plate, traveling
5 adjacent said toilet and up the backside of said toilet and into said tank, said cable
6 housing being held in position in said interior of said tank via said tank clamp, said cable

7 exiting said cable housing within said interior of said tank and connecting to said internal
8 release means within said tank to effect said flushing of said toilet by foot.

1 3. The apparatus of claim 2 wherein said base plate, having said at least one
2 opening, comprises a first opening, securing ribs and a second opening, whereby said
3 cable extends out said first opening, extends into and is encased by said cable housing,
4 said cable housing being positioned and secured within said securing ribs and then said
5 cable housing encasing said cable exiting said base plate through said second opening.

1 4. The apparatus of claim 1 wherein said first and second rollers each comprise a
2 hollow cylinder enclosing a spring and a set of pins on opposing sides of said spring,
3 each of said pins being in contact with said spring at a first end and being secured in
4 position at an opposing second end to receiving means on opposing sidewalls of each said
5 top plate for said first roller and said base plate for said second roller.

1 5. The apparatus of claim 4 wherein said top plate is pivotably attached to said base
2 plate, said apparatus further comprising:
3 said base plate having a first and a second opposing upward extending flanges
4 located at a position on said base plate for maximization of cable increase
5 within said pedal;
6 a pivot roller positioned between said first and second opposing upward extending
7 flanges;
8 a spring within said pivot roller;

9 a first pin and a second pin extending in said pivot roller and in contact with
10 opposing ends of said spring, said first and second pins extending through said
11 upward extending flanges to contact said top plate; and
12 said top plate having a first receiving means and an opposing second receiving
13 means for receiving and securing in position said first and second pins to
14 pivotably attach said top plate to said base plate.

1 6. The apparatus of claim 1 wherein said pedal is mounted to a floor adjacent an
2 existing toilet.

1 7. The apparatus of claim 5 wherein said pedal is mounted to said floor by a
2 mounting means selected from the group consisting of a mounting bracket, a spring
3 clamp, an adhesive, glue, cement, paste, epoxy resin, bonding agent, double-sided tape,
4 velcro, suction, and non-slip rubber.

1 8. The apparatus of claim 1 wherein said cable comprises an impermeable material
2 of sufficient strength, flexibility and durability to endure pressures applied during use of
3 said pedal.

1 9. The apparatus of claim 1 further including at least two swivel hooks attached to
2 an end of said cable residing in said interior of the tank, a first of said swivel hooks
3 connecting said cable to a weight and a second of said swivel hooks connecting said
4 cable to said internal release means within said tank.

1 10. The apparatus of claim 9 wherein said weight comprises a rust-proof material of
2 about 4 ounces to about 16 ounces, and comprises a shape that prevents entanglement of
3 said weight with interior components of said tank.

1 11. The apparatus of claim 1 wherein said tank clamp comprises a material of
2 sufficient rigidity and strength to endure forces applied to said tank clamp during normal
3 working operations of said pedal.

1 12. The apparatus of claim 11 wherein said tank clamp includes a back flange
2 connected to a front flange via an upper flange that has lateral extensions on opposing
3 sides thereof for stabilizing said tank clamp to said backside edge of said tank and
4 distributing forces applied to said tank clamp during use of said pedal, said back flange is
5 in contact with an exterior of said tank while said front flange is within and in contact
6 with said interior of said tank.

1 13. The apparatus of claim 12 wherein said tank clamp further includes at least two
2 outwardly protruding angled sidewall flanges extending from said front flange into said
3 interior of said tank, said outwardly protruding angled sidewall flanges including a
4 plurality of recessed portions for receiving said cable housing.

1 14. The apparatus of claim 13 wherein said recessed portions of said tank clamp
2 receive and secure said cable housing within said interior of said tank at an angle such

3 that said cable extends into said tank in a direction away from sidewalls of said tank and
4 toward said internal release means within said tank.

1 15. The apparatus of claim 14 wherein an angled guiding means encasing a portion of
2 said cable is received and secured straight across said recessed portions of said tank
3 clamp such that said angle of said angle pipe extends in a direction away from sidewalls
4 of said tank and toward said internal release means within said tank.

1 16. The apparatus of claim 1 wherein said toilet is selected from the group consisting
2 of a gravity tank toilet, a pressurized tank toilet, and a flush valve operated toilet.

1 17. The apparatus of claim 16 wherein said internal release means comprises a flapper
2 or a pressurized tank push valve.

1 18. The apparatus of claim 1 wherein said pedal is integrally formed with said toilet
2 such that cable housing and cable are invisible to the naked eye.

1 19. A foot actuated pedal apparatus comprising:
2 a base plate having at least one opening;
3 a top plate pivotably attached to said base plate;
4 a first roller attached to said top plate;
5 a second roller attached to said base plate;
6 a cable;

7 a first end of said cable affixed to a position on said base plate internal to said
8 pedal; and
9 a second end of said cable affixed to a component of a device external to said
10 pedal,
11 whereby said cable extends at said first end from said position on said base plate, over
12 said first roller of said top plate, around said second roller of said base plate, extending
13 out said at least one opening of said base plate so as to extend into and be encased by a
14 cable housing, and connecting at said second end to said component of said external
15 device, such that, upon pressure applied by foot to said top plate of said pedal, a length of
16 said cable is increased within said pedal and decreased by said length external to said
17 pedal to effect a working condition of said device.

1 20. The apparatus of claim 19 further including a cable housing encasing at least a
2 portion of said cable within said pedal whereby said cable extends out said a first opening
3 of said base plate, extends into said cable housing, and said cable housing encasing said
4 cable exiting at a second opening of said base plate.

1 21. The apparatus of claim 19 wherein said first and second rollers each comprise a
2 hollow cylinder enhousing a spring and a set of pins on opposing sides of said spring,
3 each of said pins being in contact with said spring at a first end and being secured in
4 position at an opposing second end to receiving means on opposing sidewalls of each said
5 top plate for said first roller and said base plate for said second roller.

1 22. The apparatus of claim 21 wherein said top plate is pivotably attached to said base
2 plate, said apparatus further comprising:

3 said base plate having a first and a second opposing upward extending flanges
4 located at a position on said base plate for maximization of cable increase
5 within said pedal;

6 a pivot roller positioned between said first and second opposing upward extending
7 flanges;

8 a spring within said pivot roller;

9 a first pin and a second pin extending in said pivot roller and in contact with
10 opposing ends of said spring, said first and second pins extending through said
11 upward extending flanges to contact said top plate; and

12 said top plate having a first receiving means and an opposing second receiving
13 means for receiving and securing in position said first and second pins to
14 pivotably attach said top plate to said base plate.

1 23. The apparatus of claim 19 wherein said pedal is mounted to a floor in a position in
2 close proximity to said device.

1 24. A method for foot actuated flushing of a toilet comprising:

2 providing a top plate of said pedal;

3 attaching a first roller to said top plate;

4 providing a base plate of said pedal;

5 attaching a second roller to said base plate;

6 pivotably attaching said top plate to said base plate;
7 providing a toilet having a tank with an internal release means for flushing said
8 toilet;
9 positioning a tank clamp on a backside edge of said tank such that a portion of
10 said tank clamp extends into said tank;
11 positioning a cable by extending a first end of said cable from said base plate,
12 over said first roller of said top plate, around said second roller of said base
13 plate, extending out at least one opening of said base plate and into an interior
14 of said tank at a backside of said toilet, whereby said cable is held in place by
15 said tank clamp and connected at a second end of said cable to said internal
16 release means within said tank; and
17 applying pressure by foot to said top plate of said pedal whereby said top plate
18 pivots with respect to said base plate to increase a distance between said first
19 and second rollers and thereby increase a length of said cable within said
20 pedal while simultaneously decreasing an amount of cable within said tank by
21 said length to activate said internal release means and effect flushing of said
22 toilet.

1 25. The method of claim 24 further including mounting said pedal to a floor adjacent
2 said toilet using a mounting means selected from the group consisting of a mounting
3 bracket, a spring clamp, an adhesive, glue, cement, paste, epoxy resin, bonding agent,
4 double-sided tape, velcro, suction, and non-slip rubber.

1 26. The method of claim 24 further including attaching a weight to said second end of
2 said cable within said tank.

1 27. The method of claim 26 further including attaching at least two swivel hooks to
2 said second end of said cable within said tank, a first of said swivel hooks connecting
3 said cable to said weight and a second of said swivel hooks connecting said cable to said
4 internal release means within said tank.

1 28. The method of claim 24 wherein said tank clamp assists in directing at least said
2 cable away from internal sidewalls of said tank and toward said internal release means for
3 effecting flushing of said toilet without interruption.

1 29. The method of claim 24 further including resetting said pedal by removing said
2 foot from said top plate whereby said cable returns to an original starting position with
3 said pedal and said tank.

1 30. The method of claim 24 further including integrally forming said pedal and said
2 tank clamp with said toilet such that cable housing and cable are invisible to the naked
3 eye.